

GV-SNVR System

User's Manual





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Note: No memory card slot or local storage function for Argentina.

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May 2015

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Chapter 1 Introduction

The GV-SNVR0400F / GV-SNVR1600 is a Linux-embedded Standalone Network Video Recorder which records video files directly to the internal hard drive, supporting up to 4 / 16 channels of GV-IP Cameras for network surveillance. With the feature of a Full HD HDMI video output, the GV-SNVR eliminates the need for a separate PC to view and play back video from the unit. Its four / five USB ports allow you to connect a storage device to import or export system settings, update firmware, save snapshot files and back up video in AVI format.

Optionally, you can connect a GV-Joystick V2 to control PTZ cameras. Moreover, you can remotely access the live view through mobile devices or Web browsers with advanced video features.

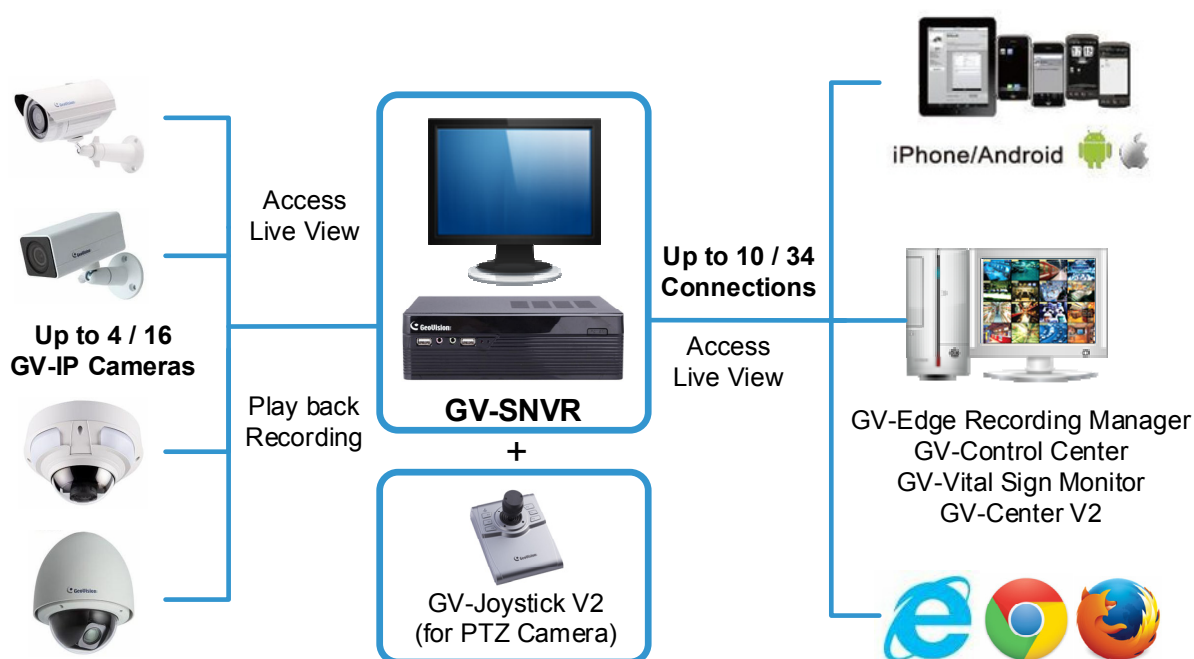


Figure 1-1

1.1 Features

- 4-Channel video recording (for GV-SNVR0400F)
- 16-Channel video recording (for GV-SNVR1600)
- Automatic search and set-up for IP cameras
- Up to 1920 x 1080 support for each channel
- Dual streams support
- Continuous, motion and scheduled recordings
- Timeline playback
- Multi-channel playback
- Display of HDD status and system temperature
- DST (Daylight Saving Time) support
- NTP (Network Time Protocol) support
- GeoVision DDNS server support
- E-mail notification for recording error and password retrieval
- Recording export
- Remote live view through Web browser
- PTZ control using GV-Joystick V2 or on-screen panel
- 1080p HDMI video output
- 1 SATA HDD drawer (3.5") for up to 4 TB storage (for GV-SNVR0400F)
- 4 SATA HDD drawer (3.5") for up to 16 TB storage (for GV-SNVR1600)
- Smart device access (iOS and Android)
- Support for 13 languages

1.2 Models

The GV-SNVR has the following models:

GV-SNVR0400F	- Supports 1 SATA HDD (3.5") - Records up to 4 IP channels
GV-SNVR1600	- Supports 4 SATA HDD (3.5") - Records up to 16 IP channels

1.3 Packing List and Package

You can choose to purchase a GV-SNVR package or a bundled package which includes 4 GV-Target IP Camera of your choice and a GV-PoE switch.

Package Options:

- Single Package for GV-SNVR0400F
- Single Package for GV-SNVR1600
- Bundled Package for GV-SNVR0400F

1.3.1 GV-SNVR Single Package

GV-SNVR0400F



1. GV-SNVR0400F
2. AC Power Cord
3. AC/DC Adapter
(DC 19V, 3.42A, 65 W)
4. Screw x 6 (for HDD)
5. SATA Cable
6. USB Mouse
7. Firmware CD/DVD
8. Software CD/DVD
9. Quick Start Guide

GV-SNVR1600



1. GV-SNVR1600
2. AC Power Cord
3. SATA Cable x 4
4. HDD Mounting Bracket Kit (4 pairs and 32 screws included)
5. Rack Mount Kit (2 L-shaped brackets and 6 screws included)
6. Rubber Foot x 4
7. USB Mouse
8. Firmware CD/DVD
9. Software CD/DVD
10. Quick Start Guide

1.3.2 Bundled Package for GV-SNVR0400F



1. GV-SNVR400F Package x 1
2. Target IP Camera x 4
3. GV-POE0400 x 1

Note: For the Target IP Camera, select any 4 models from GV-EBL1100 / 2100, GV-EBX1100 / 2100, GV-EDR1100 / 2100, GV-EFD1100 / 2100. For more information, contact our sales representatives.

1.4 Compatible Products and System Requirements

1.4.1 Supported GV-IP Cameras

The GV-SNVR0400F / 1600 is compatible with the following GV-IP Cameras:

- GV-Target Series IP Camera (Firmware V1.0 or later)
- GV-SD220/220-S (Firmware V1.04 or later)
- All the other GV-IP Cameras (Firmware V2.11 or later) **EXCEPT** the models below:
 - GV-BX110
 - GV-BL110
 - GV-Fisheye IP Camera
 - GV-MFD110
 - GV-PT110
 - GV-PTZ010D
 - GV-SD010/200/200-S

IMPORTANT:

1. The GV-SNVR supports the recording frame rate of up to 30 fps only.
 2. The GV-SNVR supports a total bandwidth of up to 50 /100 Mbps for GV-SNVR0400F / GV-SNVR1600 respectively.
-

1.4.2 Supported GeoVision Applications

The GV-SNVR0400F / 1600 is compatible with the following applications:

- GV-Edge Recording Manager (Windows Version V1.1.0.0 or later)
- GV-Control Center (V3.3.0.0 or later)
- GV-Center V2 (V15.10 or later)
- GV-Vital Sign Monitor (V15.10 or later)
- GV-Eye (V2.0 or later)

1.4.3 System Requirements

Recommended Hard Disks

GV-SNVR0400F supports 1 SATA HDD (3.5") with up to 4 TB capacities, and GV-SNVR1600 supports 4 SATA HDD (3.5") with total up to 16 TB capacities. For system efficiency, it is recommended to use the enterprise-level hard disk drives instead of desktop-level or green HDD. For tested hard disk drives, see *Appendix*.

Note: The GV-SNVR does not support the 2.5" SATA HDD.

Supported Web Browsers

1. Internet Explorer 8 or later
2. Google Chrome 33.0 or later
3. Mozilla Firefox 28.0 or later

1.5 Options

Optional devices can expand your GV-SNVR's capabilities and versatility. Contact your dealer for more information.

GV-Joystick V2	The GV-Joystick V2 facilitates the PTZ camera control. It can be plugged into the GV-SNVR for independent use to empower the operation of PTZ cameras.
GV-POE Switch	The GV-POE Switch is designed to provide power along with network connection for IP devices. The GV-POE Switch is available in various models with different numbers and types of ports.
Slide Rail Kit	The Slide Rail Kit is used to mount a rail for the GV-SNVR1600 in a 19" cabinet.

1.6 Overview

1.6.1 Front View

1.6.1.1 GV-SNVR0400F

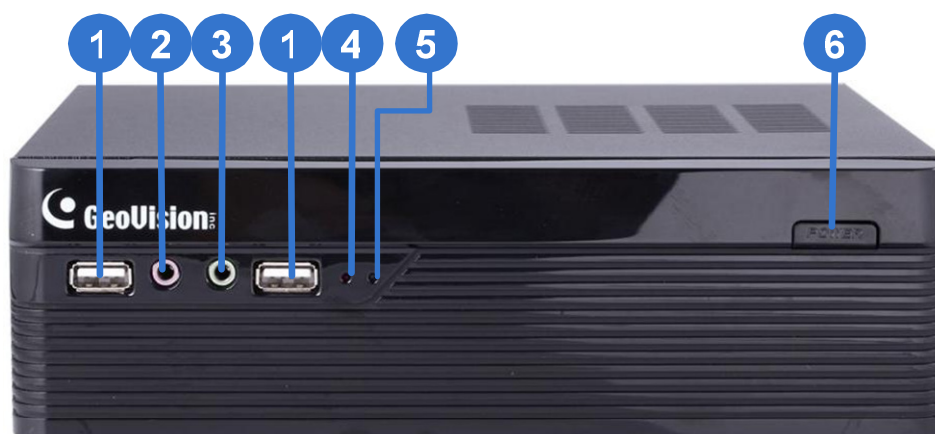


Figure 1-2

No.	Name	Function
1	USB 2.0 Port	Connects to keyboard, mouse, storage device or GV-Joystick V2.
2	Audio In	Not functional.
3	Audio Out	Connects to speaker.
4	Power LED	Shows constant blue when the power is supplied for the device.
5	HDD Error LED	Shows constant red when the following situations occur: • No hard drive is installed. • The hard drive is not formatted. • The hard drive fails.
6	Power Button	Turns on/off the power.

1.6.1.2 GV-SNVR1600



Figure 1-3

No.	Name	Function
1	Power Button	Turns on/off the power.
2	Power LED	Shows constant blue when the power is supplied for the device.
3	HDD Status LED	Flashes blue when the hard drive is writing or reading data.
4	HDD Error LED	Shows constant red when the following situations occur: - No hard drive is installed. - The hard drive is not formatted. - The hard drive fails.
5	WAN LED	Flashes blue when the WAN port is receiving activity.
6	LAN LED	Flashes blue when the LAN port is receiving activity.
7	USB 2.0 Port	Connects to keyboard, mouse, storage device or GV-Joystick V2.

1.6.2 Rear View

1.6.2.1 GV-SNVR0400F



Figure 1-4

No.	Name	Function
1	Gigabit Ethernet Port	Connects to the network.
2	HDMI Output	Connects to the HD TV.
3	USB 2.0 Port	Connects to keyboard, mouse, storage device or GV-Joystick V2.
4	Default Button	Restores the device to default settings. Press the button for 15 seconds to load default.
5	Power Input	Connects to power supply.

1.6.2.2 GV-SNVR1600



Figure 1-5

No.	Name	Function
1	Audio Microphone In Port	Not functional.
2	VGA Monitor Output	Connects to the VGA monitor.
3	HDMI Port	Connects to the HD TV.
4	USB 2.0 Port x 4	Connects to keyboard, mouse, storage device or GV-Joystick V2.
5	Power Input	Connects to power supply.
6	Gigabit Ethernet Port (LAN)	Connects to the network.
7	Gigabit Ethernet Port (WAN)	Connects to the network.
8	Audio Line Out Port	Connects to the headphone.
9	Audio Line Out Port	Connects to the speaker.
Note: When the two Ethernet ports (No. 6 and No. 7) are used together, one is LAN port and the other is WAN port.		

Chapter 2 Getting Started

2.1 Installation

2.1.1 GV-SNVR0400F

The GV-SNVR0400F uses SATA hard drive for video data storage. Before recording, be sure to install the hard drive.

Installing the Hard Drive

Follow the steps below to install the hard drive to the GV-SNVR0400F.

1. Unscrew the two screws on the rear panel and remove the cover.



Figure 2-1

2. Unscrew the drive drawer and take it out from the device.



Figure 2-2

3. Place the hard drive in the drive drawer as below by aligning the three holes.

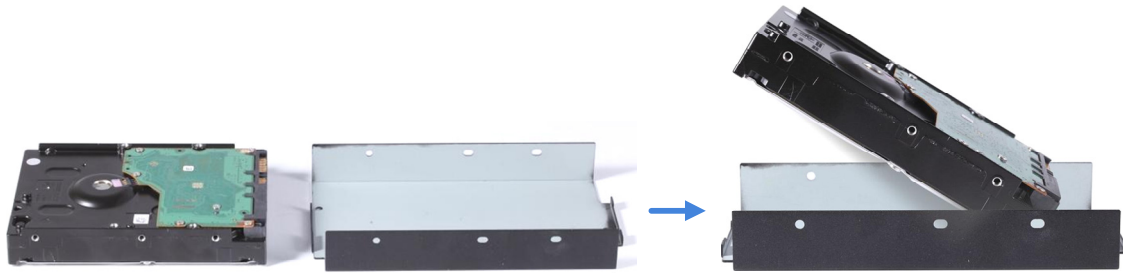


Figure 2-3

4. Secure the hard drive with the drive drawer using the supplied 6 screws (3 screws on each side).

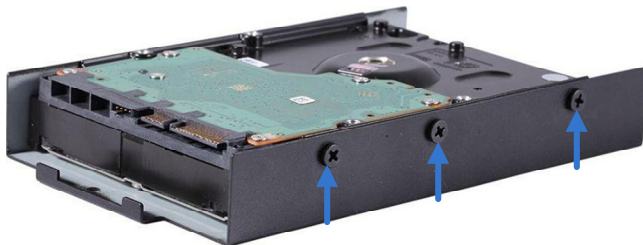


Figure 2-4

5. Connect the SATA Power Cable and Data Cable to the hard drive.

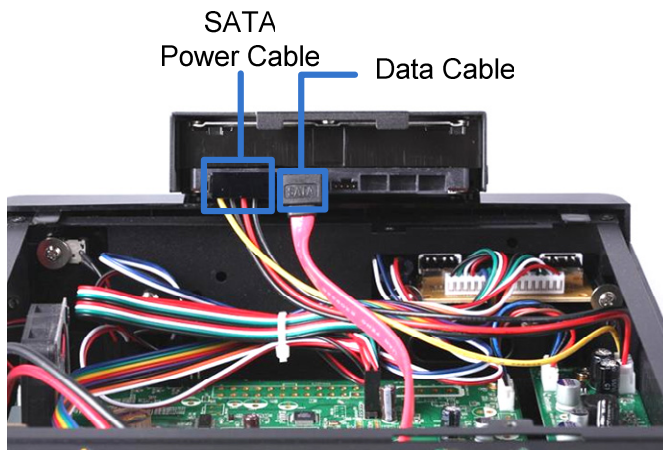


Figure 2-5

6. Put the drive drawer back in the device and secure the two screws on the drive drawer (Figure 2-2).
7. Assemble the cover with the device by tightening the screws on rear panel (Figure 2-2).

The hard drive is now ready to use.

2.1.2 GV-SNVR1600

The GV-SNVR1600 uses SATA hard drive for video data storage. Before recording, be sure to install the hard drive.

Installing the Hard Drive

Follow the steps below to install the hard drive to the GV-SNVR1600.

1. Loosen the 6 screws and remove the cover.



Figure 2-6

2. Assemble the mounting brackets with the hard drive and tighten the screws on both sides.

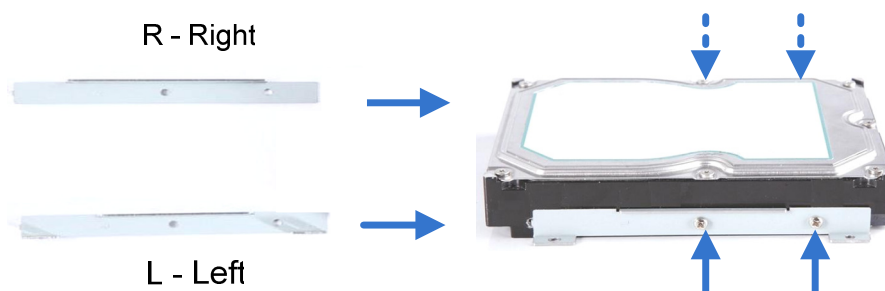


Figure 2-7

Note: Each mounting bracket is labeled **L** or **R** for recognition. Align the mounting bracket with the holes on the hard drive and make sure it is secured to the correct side.

3. Align the mounting bracket with the holes inside the unit.

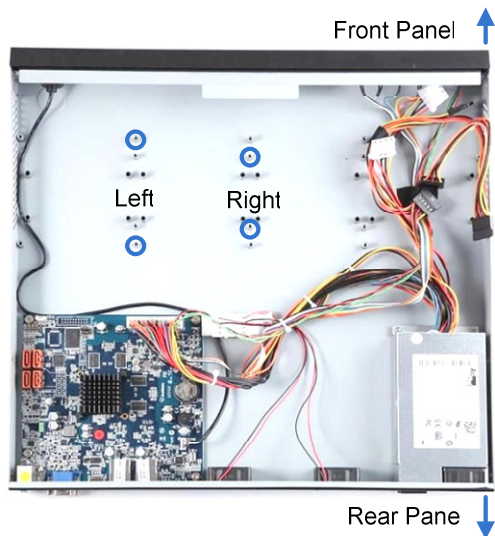
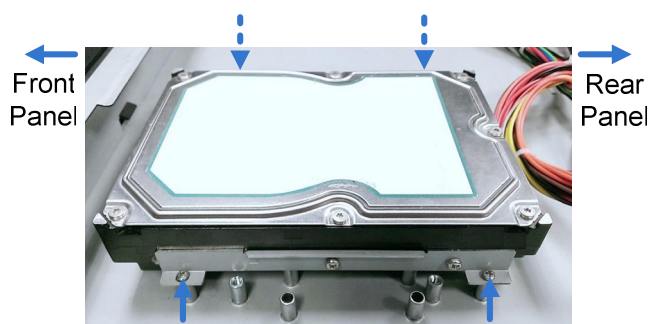


Figure 2-8

4. Tighten the 4 screws on the side of the hard drive.



Side View of the HDD

Figure 2-9

5. Connect the SATA Power Cable and Data Cable to the hard drive.

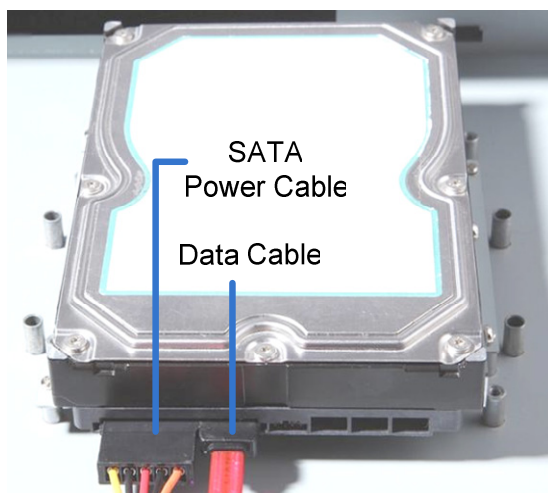


Figure 2-10

6. To install more HDDs, repeat the steps above.
7. Place the cover back and tighten the screws.

The hard drive is now ready for use.

Installing the L-Shaped Brackets

Tighten the 6 screws to secure and attach the 2 L-shaped brackets to each side of GV-SNVR1600.



Figure 2-11

2.2 Connecting the GV-SNVR

Follow the steps below to connect the GV-SNVR.

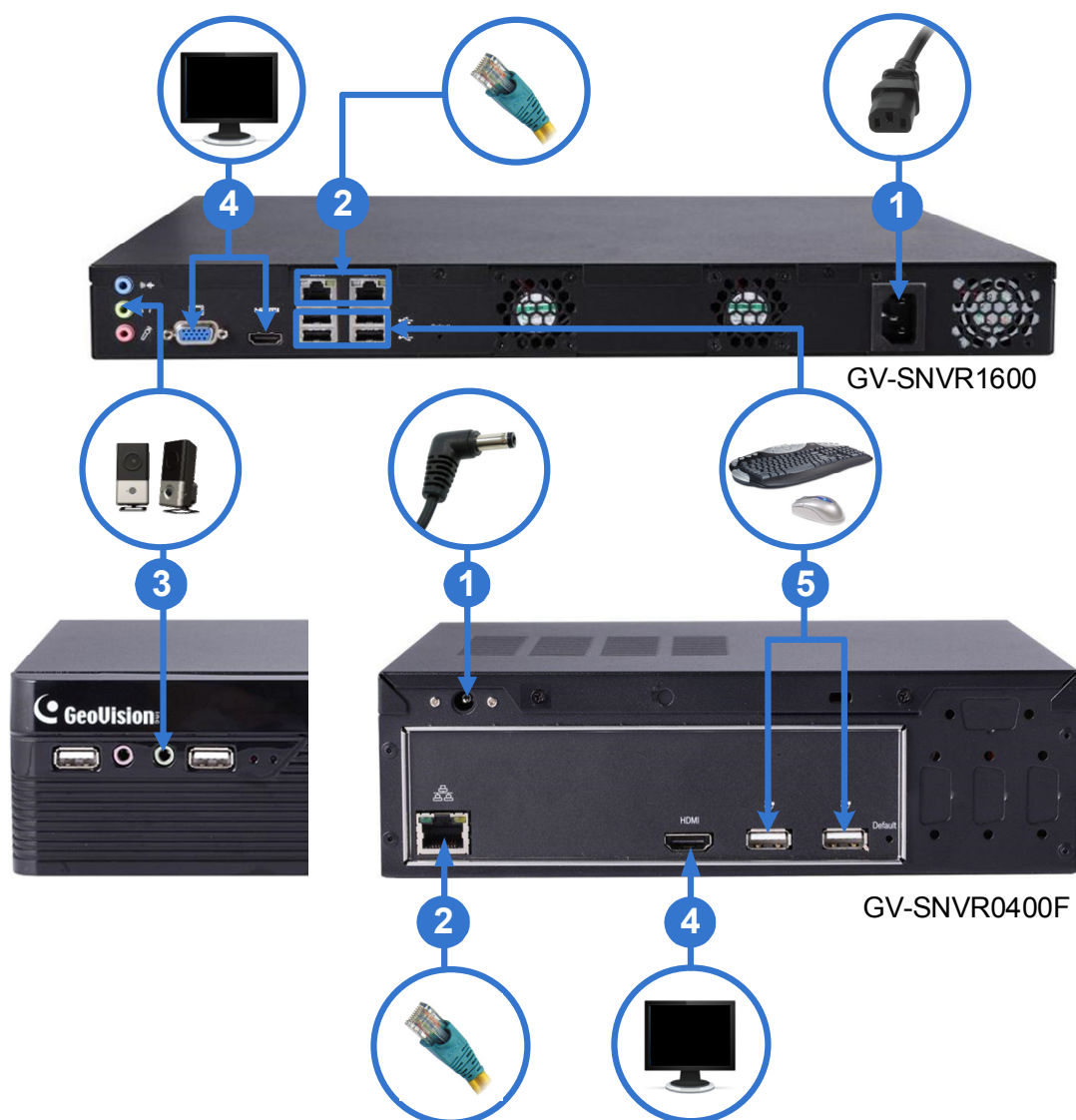


Figure 2-12

1. Connect the GV-SNVR to power.
2. Connect the GV-SNVR to the LAN port using the RJ-45 cable.
3. Connect a speaker to the Audio Line Out port.
4. Connect the HDTV to HDMI connector for video output. For GV-SNVR1600, optionally connect the VGA monitor to the D-Sub connector for dual-monitor display.
5. Connect the mouse and the keyboard to the USB ports.

Press the power button to turn on the GV-SNVR.

Note:

1. The GV-SNVR is DHCP enabled. When it is connected to the network, it will be automatically assigned an IP address.
2. For GV-SNVR1600, the monitor used for VGA output must be capable of having a screen resolution of 1080p.

2.2.1 Network Connection for GV-SNVR1600

There are two network ports, LAN and WAN, for the GV-SNVR1600. If both network ports are used simultaneously, only the WAN port can be connected to the Internet. Therefore, it is recommended to connect the devices as below.

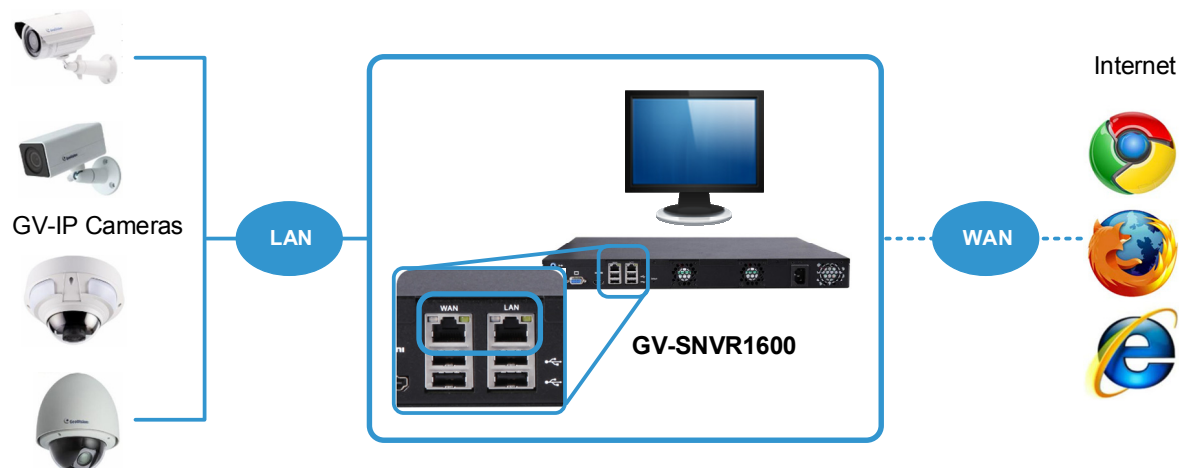


Figure 2-13

1. Connect GV-IP Cameras to the GV-SNVR1600 through the LAN port.
2. Connect GV-SNVR1600 to the Internet through the WAN port.

Note: When the LAN and WAN ports are used together, the Auto Search function is only supported by the LAN port. To connect to GV-IP Cameras under the WAN, you can add the cameras manually.

IMPORTANT: It is required to divide LAN and WAN networks into different subnets or segments; otherwise, your network will fail. For details, see [3.3 Network](#).

2.3 Setting Up GV-IP Camera

After installing the IP cameras under the same LAN with the GV-SNVR, you can now add the cameras to GV-SNVR.

2.3.1 Automatically Setting Up GV-IP Camera

To automatically set up the IP cameras, follow the steps below.

1. Power on the GV-SNVR. It automatically searches and lists the IP cameras under the same LAN.
2. You are prompted with a dialog box asking if you want to automatically assign IP address. The automatic assignment will only apply on the cameras with IP address **192.168.0.10**.

No.		CH	Model	IP Address	Port	MAC Address	Resolution	Bandwidth	Status
1	☐		GV-EFD2100	192.168.0.10	10000	0013E2FF12C8			
2	☐		GV-EBL2100	192.168.0.10	10000				
3	☐		GV-VD1500	192.168.0.10	10000				
4	☐		GV-SD2411	192.168.0.10	10000				

Do you want to automatically assign IP devices?

☐ Don't ask me again

Cancel Apply

Figure 2-14

3. Click **Apply**. The GV-SNVR assigns unused IP addresses to the cameras in an ascending numerical order and enables the connection.

No.		CH	Model	IP Address	Port	MAC Address	Resolution	Bandwidth	Status
1	☒	01	GV-EFD2100	192.168.0.2	10000	0013E2FF12C8	H264:1280x1024 H264:320x256	0.7Mbps	Connected
2	☒	02	GV-EBL2100	192.168.0.3	10000	0013E2FF143D	H264:1920x1080 H264:448x252	5.0Mbps	Connected
3	☒	03	GV-VD1500	192.168.0.4	10000	0013E2FF0E87	H264:1280x1024 H264:320x256	6.2Mbps	Connected
4	☒	04	GV-SD2411	192.168.0.5	10000	0013E2FF1B3F	H264:1920x1080 H264:448x252	2.7Mbps	Connected

Figure 2-15

Upon successful connection, the status displays “Connected”, with the resolution and bandwidth being displayed in the correspondent columns. Close the Camera page to access the live view.

IMPORTANT:

1. By default, GV-IP Cameras use the IP address **192.168.0.10**. The GV-SNVR will automatically assign unused IP addresses to these cameras to avoid IP address conflict with others under the same LAN.
2. The GV-SNVR connects to the IP cameras with the default ID and password **admin**. If the IP camera uses a different ID and password, click the **Edit** icon  and type the correct login information.



Camera Name	CH01
Username	admin
Password	
IP Address	192.168.0.79
Port	10000
Connect 	

3. The GV-SNVR supports a total bandwidth of up to 50 /100 Mbps for GV-SNVR0400F / GV-SNVR1600 respectively. The total bandwidth can be found in the top-right corner of the camera list.

Camera Selected:3

Total Bandwidth:11.9 Mbps

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No.		CH	Model	IP Address	Port	MAC Address	Resolution	Bandwidth	Status	Brand	
1	☒	01	GV-EFD2100	192.168.4.182	10000	0013E2FF12C8	H264:1280x1024 H264:320x256	0.7Mbps	Connected	Geovision	 
2	☒	02	GV-EBL2100	192.168.7.32	10000	0013E2FF143D	H264:1920x1080 H264:448x252	5.0Mbps	Connected	Geovision	 
3	☒	03	GV-VD1500	192.168.3.185	10000	0013E2FF0E87	H264:1280x1024 H264:320x256	6.2Mbps	Connected	Geovision	 

2.3.2 Manually Connecting GV-IP Camera

To manually add the GV-IP Camera to the camera list, follow the steps below.

1. On the Camera page, click the **Add Cameras**  button.
2. Type the IP Address, Username and Password of the desired IP camera. Keep the default Port **10000** or modify if necessary.

Add Camera	1	(1 /256 max)	Duplicate
Protocol	Geovision		
Username			
Password			
IP Address			☐
Port	10000		☐
			Cancel Apply

Figure 2-16

3. Click **Apply** to add the IP camera.
4. To add multiple cameras, repeat step 2, type the number of cameras you want to create in the **Add Camera** column.
 - To duplicate camera with same IP address but different ports, type the IP address and click the **Duplicate** column of Port.
 - To duplicate camera with same port number but different IP addresses, type the port number and click the **Duplicate** column of IP Address.
5. To connect the GV-SNVR with the added cameras, click the box next to the **CH** column on the Camera page.

+

↺

Camera Selected:3 , Total Bandwidth:11.9 Mbps

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◀

▶

No.		CH	Model	IP Address	Port	MAC Address	Resolution	Bandwidth	Status	Brand	
1	☒	01	GV-EFD2100	192.168.4.182	10000	0013E2FF12C8	H264:1280x1024 H264:320x256	0.7Mbps	Connected	Geovision	✕🗑
2	☒	02	GV-EBL2100	192.168.7.32	10000	0013E2FF143D	H264:1920x1080 H264:448x252	5.0Mbps	Connected	Geovision	✕🗑
3	☒	03	GV-VD1500	192.168.3.185	10000	0013E2FF0E87	H264:1280x1024 H264:320x256	6.2Mbps	Connected	Geovision	✕🗑
4	☐		GV-SD2411	192.168.4.79	10000	0013E2FF1B3F				Geovision	✕🗑
5	☐		GV-BX2500	192.168.0.11	10000	0013E209C3A3				Geovision	✕🗑

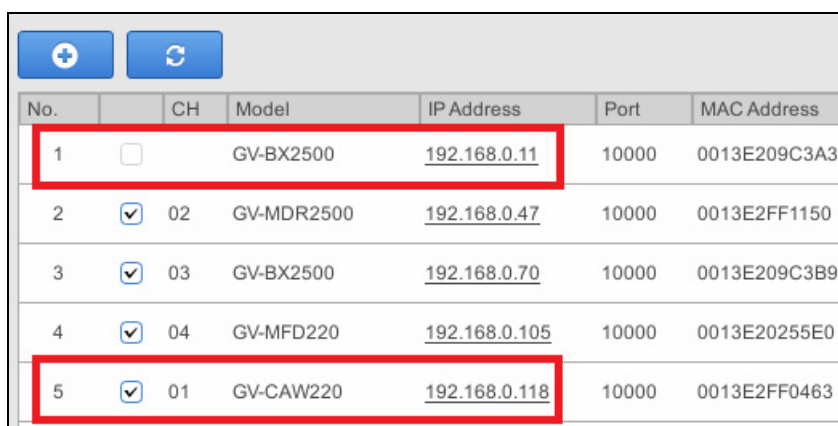
Figure 2-17

6. To delete the added IP camera, click the **Delete** button  of the camera on the Camera page.

2.3.3 Changing Camera IP Address and Assigning Channels

On the Camera page, you can change the IP address of the connected cameras by clicking on the IP address.

You can also re-assign the camera to another channel. For example, to change the camera on Channel 1, deselect the connected camera on Channel 1 and select another camera for connection. The selected camera is now assigned to Channel 1.



No.		CH	Model	IP Address	Port	MAC Address
1	☐	02	GV-BX2500	<u>192.168.0.11</u>	10000	0013E209C3A3
2	☒	02	GV-MDR2500	<u>192.168.0.47</u>	10000	0013E2FF1150
3	☒	03	GV-BX2500	<u>192.168.0.70</u>	10000	0013E209C3B9
4	☒	04	GV-MFD220	<u>192.168.0.105</u>	10000	0013E20255E0
5	☒	01	GV-CAW220	<u>192.168.0.118</u>	10000	0013E2FF0463

Figure 2-18

2.4 Formatting the Hard Drive

After installing the hard drive to GV-SNVR, you need to format the hard drive before enabling the monitoring.

1. On the main screen, click the **Setting** button.



Figure 2-19

2. Select **Storage**.

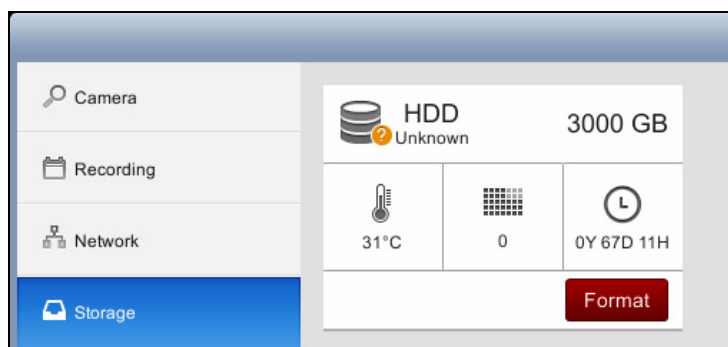


Figure 2-20

3. Click **Format**. This dialog box appears.

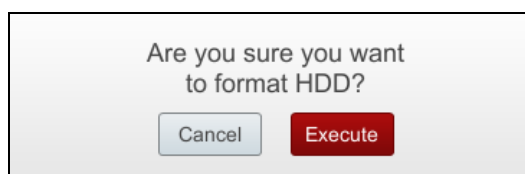


Figure 2-21

4. Click **Execute** to format the hard drive.

When the hard drive is successfully formatted, its icon should be marked with a green tick, and the “Normal” message appears. The information of operating temperature, hard drive status and total time in use is also displayed.

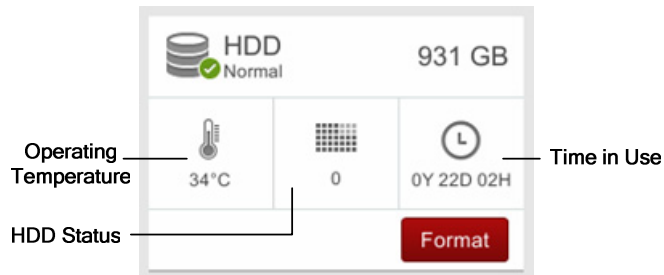


Figure 2-22

Note: When the hard drive status displays other value instead of **0**, replace the hard drive with a new one to ensure proper video recording.

2.5 Main Screen

Close the Camera page to see the connected channels on the main screen. Here we use GV-SNVR0400F for illustration.

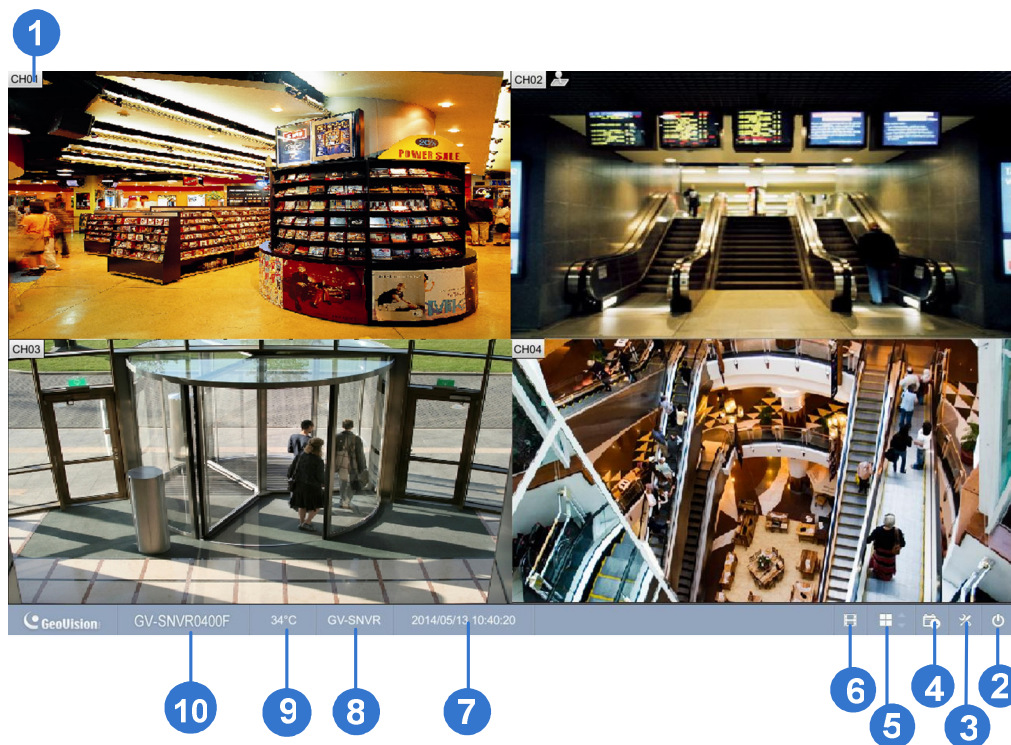


Figure 2-23

No.	Name	Description
1	Camera Name	Indicates the camera name. The column changes from gray to red when the recording is enabled. See <i>Camera Name</i> in 3.1 <i>Camera</i> .
2	System	Brings up the options: Log Out and Shutdown.
3	Setting	Accesses the following setting pages: • Camera (see 3.1 <i>Camera</i>) • Recording (see 3.2 <i>Recording</i>) • Network (see 3.3 <i>Network</i>) • Storage (see <i>Chapter 2.4 Formatting the Hard Drive</i>) • Display (see 3.5 <i>Display</i>) • Service (see 3.6 <i>Service</i>) • System (see 3.7 <i>System</i>)
4	Record	Starts/Stops monitoring.
5	Division & Page Up / Down	Selects screen divisions and switch between cameras in single division.

6	Playback	Displays the playback panel.
7	Date / Time	Displays the current date and time.
8	Device Name	Displays the device name of GV-SNVR. See <i>Device Name</i> in 3.7 <i>System</i> .
9	Temperature	Displays the current temperature.
10	Model Name	Displays the model name of GV-SNVR.

2.6 Enabling Recording

To start recording, click the **Record** button (No. 4, Figure 2-23) and select a camera. To enable recording for all the connected cameras, select **Start All Monitoring**.

By default, the GV-SNVR records with the **Round-the-clock** mode and **H.264** codec. The default recording resolution depends on the settings of each camera.

- To change recording mode, see *3.2 Recording*.
- To change video resolution, see *3.1 Camera*.

2.7 Playing Back Video

You can instantly play back the recorded video without interrupting the monitoring and recording.

- To instantly play back the recording of one single channel, click the **Camera Name** (No. 1, Figure 2-23), select **Instant Playback**.
- To instantly play back the recording of all channels, click the **Playback** button (No. 6, Figure 2-23).

Note: For details on playing back the recording, see *Chapter 4 Video Playback*.

2.8 Live Monitoring

GV-SNVR0400F

On the main screen, the live view of connected cameras is displayed in 4 divisions by default.

You can click the **Division** button  (No. 5, Figure 2-23) and select **1** or **4 Division**.

Optionally, click on the live view of desired camera to switch to full screen.

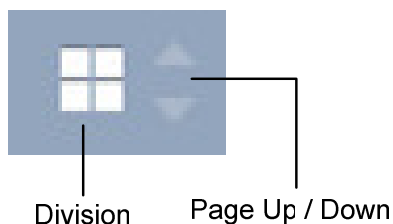


Figure 2-24

GV-SNVR1600

On the main screen, the live view of connected cameras is displayed in 16 divisions by

default. You can click the **Division** button  and select **1**, **4** or **9 Division**. Optionally, click on the live view of desired camera to switch to full screen.

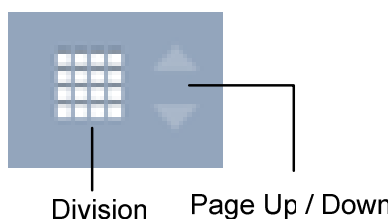


Figure 2-25

2.8.1 Snapshot

To take a snapshot of live or playback video, follow the steps below.

1. Connect an USB storage device of FAT32 format to the GV-SNVR.
2. Click the camera name of desired camera and select **Snapshot**. The message "Snapshot Success" pops up when the captured image is successfully saved to the USB storage device.

Each image is automatically saved in JPEG format with a file name indicating the date and time of snapshot.

2.8.2 Audio

To enable the audio function on live video, follow the steps below.

Note: To listen to the audio, make sure the **Enable Audio** function is applied for the camera. For details, see [3.1 Camera](#).

1. Click the live view of the desired camera to switch to full screen.
2. Click the camera name and select **Speaker**. The audio icon  appears beside the camera name, and the audio is now accessible.

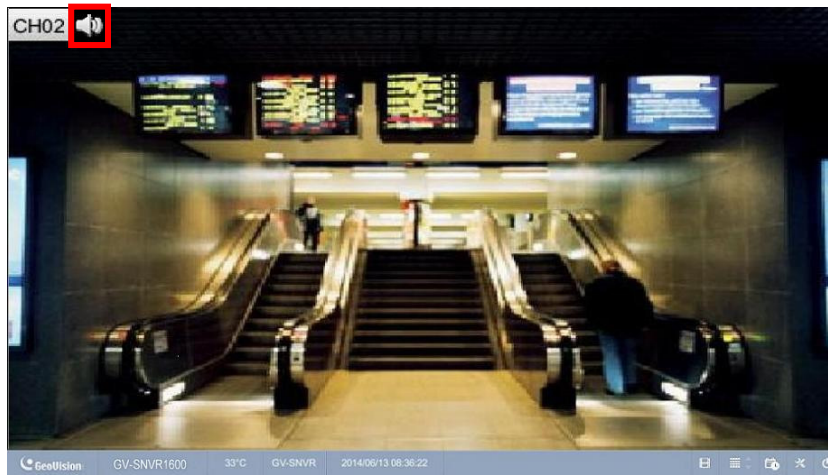


Figure 2-26

2.8.3 PTZ Control

To enable the PTZ function on live video, click the camera name of desired camera and select **Enable PTZ**. The PTZ control panel appears at the lower-right corner of the live view.

Note: The option is only available for the cameras supporting PTZ functions.

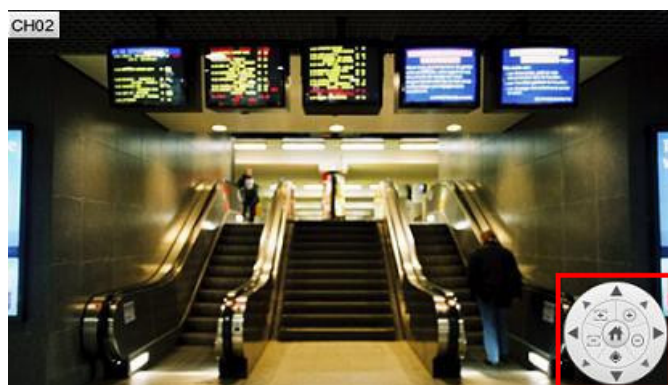


Figure 2-27

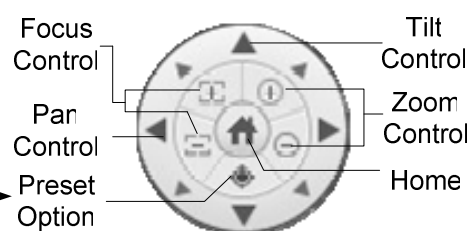


Figure 2-28

- **Home:** Brings the PTZ live view back to the Home position.
- **Pan/Tilt Control:** Allows the camera to pan and tilt to any angle.
- **Zoom Control:** Allows the camera to zoom in or out.
- **Focus Control:** Adjusts the camera to focus in or out.
- **Preset Option:** Moves the camera to a preset point by entering a preset number using the onscreen keypad.

To enable PTZ control, you can also use the GV-Joystick V2, a plug-and-play device used to pan, tilt, zoom and focus a PTZ camera. When the GV-Joystick V2 is connected to the USB port on the GV-SNVR, the Joystick icon  will appear beside the camera name.



Figure 2-29

For details on the GV-Joystick V2, see *GV-Joystick V2 User's Manual*.

Note: The GV-SNVR does not support GV-Keyboard.

Digital PTZ Function

For non-PTZ cameras, the Digital PTZ (DPTZ) function allows you to simulate the PTZ movement on the screen.

Note: The DPTZ function is only available for GV-SNVR1600.

To enable the DPTZ function on live video, click the camera name of desired camera and select **Enable Digital PTZ**. The PTZ control panel appears at the lower-right corner of the live view.

Click the **Zoom In** button first and then click **Tilt** and **Pan** buttons to move the camera view.

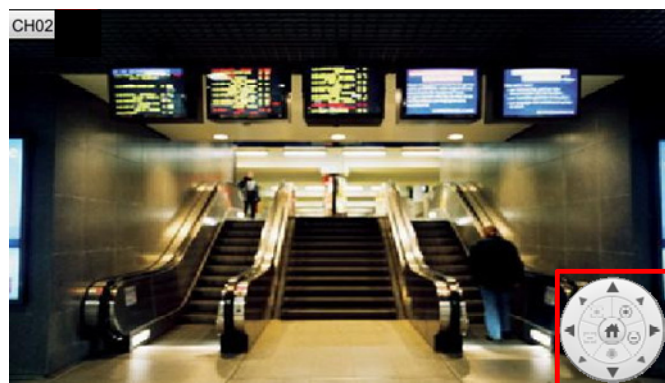


Figure 2-30

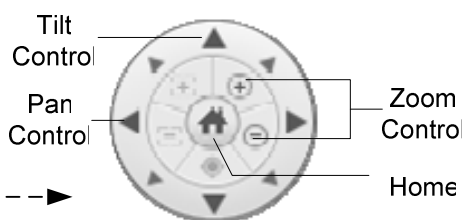


Figure 2-31

- **Home:** Brings the DPTZ live view back to the Home position.
- **Pan/Tilt Control:** Allows you to pan and tilt on the live view.
- **Zoom Control:** Allows you to zoom in or out on the live view.

Note:

1. The Focus Control and Preset functions are not supported.
 2. The DPTZ function is only available for non-PTZ cameras.
-

Chapter 3 System Configuration

This section introduces the settings of camera, video recording, network, storage, display, service and system.

3.1 Camera

To access the camera settings, click the **Edit** button  of the camera on the Camera page.

+

↺

Camera Selected:3 , Total Bandwidth:11.9 Mbps

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⏪ ⏩

No.		CH	Model	IP Address	Port	MAC Address	Resolution	Bandwidth	Status	Brand	
1	☒	01	GV-EFD2100	192.168.4.182	10000	0013E2FF12C8	H264:1280x1024 H264:320x256	0.7Mbps	Connected	Geovision	✕ 🗑
2	☒	02	GV-EBL2100	192.168.7.32	10000	0013E2FF143D	H264:1920x1080 H264:448x252	5.0Mbps	Connected	Geovision	✕ 🗑
3	☒	03	GV-VD1500	192.168.3.185	10000	0013E2FF0E87	H264:1280x1024 H264:320x256	6.2Mbps	Connected	Geovision	✕ 🗑
4	☐		GV-SD2411	192.168.4.79	10000	0013E2FF1B3F				Geovision	✕ 🗑

Figure 3-1

The Camera Settings page appears.

CH1

Camera Name

CH01

Username

admin

Password

IP Address

192.168.4.182

Port

10000

Connect



Enable Audio

☐

Motion Area

 1

Motion Sensitivity

 1

Codec

H264

Resolution

1280x1024

FPS

30

Quality

Good

Max. Bitrate

6000

Image Orientation

Normal

Flicker less

60Hz

Close

Apply



Figure 3-2

- **Camera Name:** Type a desired name for the camera.
- **Username:** Type the username of the camera. The default is **admin**.
- **Password:** Type the password of the camera. The default is **admin**.

- **Enable Audio:** Click to enable audio streaming.
- **Motion Area:** Draw up to 8 areas with different sensitivity values on the image for motion detection.
- **Motion Sensitivity:** Configure the sensitivity value from 1 to 10 for the motion detection. The higher the value, the more sensitive the camera is to the motion.
- **Codec:** The video codec is H.264.
- **Resolution:** Select the video resolution for the camera.
- **FPS:** Set up recording frame rate for the camera. Note the GV-SNVR0400F / 1600 supports up to 30 fps.
- **Quality:** Select the level of video quality.
- **Max. Bit Rate:** Set up the maximum bit rate of video stream.
- **Image Orientation:** Adjust the image orientation by selecting **Normal**, **Horizontal Mirror**, **Vertical Flip** or **Rotate 180**.
- **Flicker less:** The frequency of your camera's image is automatically matched with the frequency of indoor light sources, e.g. fluorescent lighting. You can also select 50 Hz or 60 Hz manually. If the frequencies don't match, faint light and dark bars may appear in your images. Check the power utility to determine which frequency is used.

To enable the settings, click **Apply**.

3.2 Recording

You can set up desired recording mode for specific period on specific days for each connected camera. The default recording mode is round-the-clock.

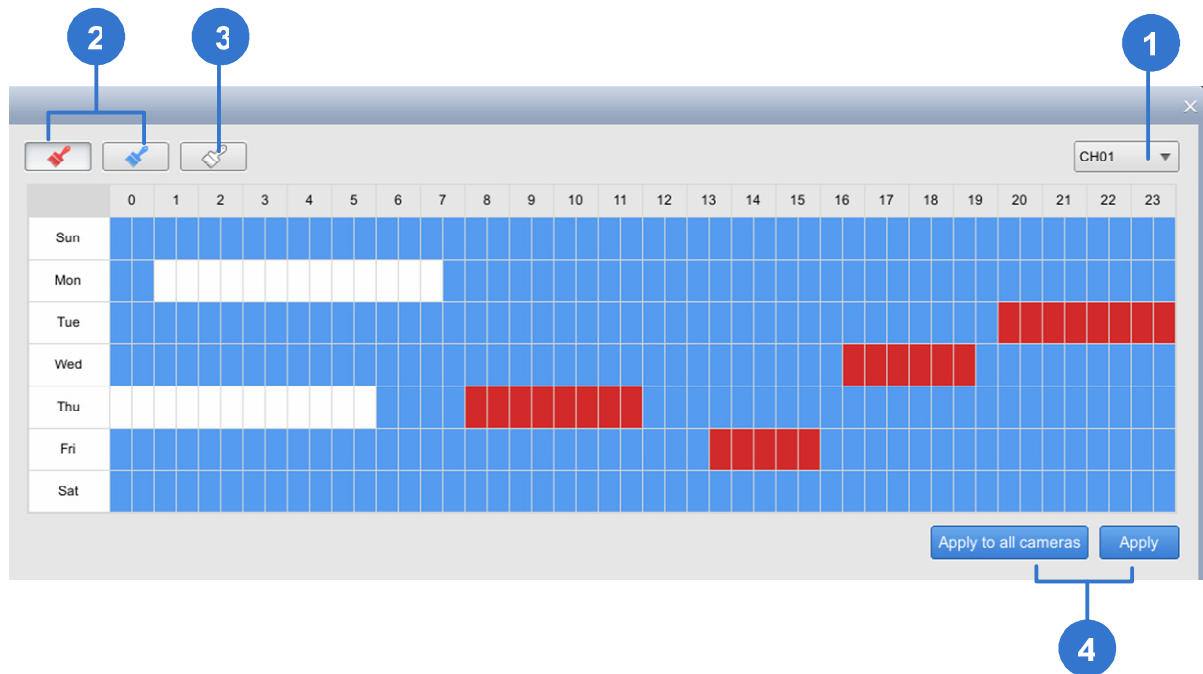


Figure 3-3

1. Select a camera from the drop-down list at the upper-right corner.
2. To set up the recording mode, click the **Motion Recording** icon  or **Round-the-clock** icon  and drag the cursor on the desired period.
3. To clear the settings, click the **Clear** icon and drag the cursor on the desired period.
4. Click **Apply** or **Apply to all cameras** as needed to enable the settings.

3.3 Network

The Network section includes basic network configurations that enable the GV-SNVR to be connected to the network. By default, the GV-SNVR is assigned with a dynamic IP address when connecting to the network.

[LAN]

LAN	DDNS	E-Mail	Web Server
IP Configuration	DHCP ▼		
MAC Address	00:13:E2:0E:e6:3B		
IP Address	192.168.5.47		
Subnet Mask	255.255.248.0		
Gateway	192.168.0.1		
Primary DNS	192.168.0.1		
Second DNS	192.168.0.2		
Apply			

Figure 3-4

- **IP Configuration:** Select **DHCP** or **Static** according to your network environment.
- **MAC Address:** Displays the MAC Address of the GV-SNVR.

To assign a static IP address, select **Static** and fill out the required settings below.

- **IP Address:** Type a static IP address for the GV-SNVR. The default is **192.168.0.100**.
- **Subnet Mask:** Type a subnet mask. The default is **255.255.255.0**.
- **Gateway:** Type a gateway. The default is **192.168.0.1**.
- **Primary DNS:** Type a primary DNS. The default is **192.168.0.1**.
- **Second DNS:** Type a second DNS. The default is **192.168.0.2**.

Click **Apply**. The GV-SNVR is now accessible by entering the assigned IP address on Web browser.

[WAN]

LAN	WAN	DDNS	E-Mail	Web Server
IP Configuration	DHCP ▼			
MAC Address	00:13:E2:FF:18:1C			
IP Address	192.168.1.243			
Subnet Mask	255.255.255.0			
Gateway	192.168.1.1			
Primary DNS	192.168.100.1			
Second DNS	192.168.100.2			
PPPoE Username				
PPPoE Password				
Apply				

Figure 3-5

- **IP Configuration:** Select **DHCP** or **Static** according to your network environment.
- **MAC Address:** Displays the MAC Address of the GV-SNVR.

To enable the PPPoE connection, select **PPPoE** and fill out the required settings below.

- **Primary DNS:** Type a primary DNS. The default is **192.168.100.1**.
- **Second DNS:** Type a second DNS. The default is **192.168.100.2**.
- **PPPoE Username:** Type the username you have registered for PPPoE.
- **PPPoE Password:** Type the password you have registered for PPPoE.

Note: The WAN configuration is only available for GV-SNVR1600.

IMPORTANT: When the LAN and WAN are applied simultaneously, note the following:

- Only the WAN can be connected to the Internet.
 - Only the IP Cameras under the same LAN can be searched by the GV-SNVR1600. To connect with the IP cameras under the WAN, you must add the cameras manually. For details, see [2.3.2 Manually Connecting GV-IP Camera](#).
-

[DDNS]

DDNS (Dynamic Domain Name System) provides a convenient way of accessing the GV-SNVR when using a dynamic IP address. DDNS assigns a domain name to the GV-SNVR, so you do not need to go through the trouble of checking if the IP address assigned by DHCP Server or ISP (in xDSL connection) has changed. Before enabling the following DDNS function, you should have applied for a Host Name from the DDNS service provider's website. The provider is GeoVision DDNS Server:

<http://ns.gvdip.com/register.aspx>.

LAN	DDNS	E-Mail	Web Server
DDNS Server	GeoVision DDNS Server		
DDNS Host name	snvr.gvdip.com		
DDNS Password	••••••		
Last Update Time			
☒ Enable		Complete	

Figure 3-6

To enable the DDNS function, click the **Enable** box, type the hostname and password you have registered with GeoVision DDNS Server and click **Apply**.

[E-mail]

Configure your mail server to allow e-mail notification upon:

- Recording error of writing recording data to the hard disk drive
- Request for retrieving the username and password for system login

LAN	DDNS	E-Mail	Web Server
Sender	admin@geovision.com.tw		
Receiver	security@geovision.com.tw		
SMTP Server	geovision.com.tw		
SMTP Port	25		
Authentication	Disable ▼		
SMTP Username			
SMTP Password			
Apply			

Figure 3-7

- **Sender:** Type the sender's e-mail address.
- **Receiver:** Type the recipients' e-mail address.
- **SMTP Server:** Type your mail server's URL address or IP address.
- **SMTP Port:** Type your mail server's port value.
- **Authentication:** Select **Enable** if the SMTP Server needs authentication and type a valid username and password to log in the SMTP server in the next two columns. Select **Enable SSL** if your e-mail server requires the SSL authentication for connection.

[Web Server]

LAN	DDNS	E-Mail	Web Server
Web Port	80		
Streaming port (VSS)	10000		
			Apply

Figure 3-8

- **Web Port:** The Web Port is used for connection with compatible GeoVision software and allows users to access GV-SNVR through the Web interface. The default port is 80.
- **Streaming port (VSS):** The VSS streaming port is used for connection with GV-Eye mobile application and compatible GeoVision software. The default port is 10000.

3.4 Storage

You must format the hard drive before enabling the video recording. For details, see *Formatting the Hard Drive* in *Chapter 2*.

3.5 Display

You can adjust how you want GV-SNVR to be displayed.

Language	English ▼
Show Style	Default ▼
Date Format Setup	YYYY-MM-DD ▼
Temperature	°C ▼
Auto Scan(sec.)	<input type="range"/> 15
Resolution	1080P ▼
Apply	

Figure 3-9

- **Language:** Select a language for the OSD interface.
- **Show Style:** Select a color scheme for GV-SNVR interface.
- **Date Format Setup:** Select a display format for the date.
- **Temperature:** Select to display the operating temperature in Celsius or Fahrenheit.
- **Auto Scan (sec.):** Set a scan interval in seconds to enable the Auto Scan function. If the number of cameras added exceeds the number of live view grids available, the cameras will be shown in sequence for the selected time interval. In the example of a 15-second scan interval with 16 cameras in 9-ch division, GV-SNVR will alternate between 15 seconds of cameras 1 - 9 and 15 seconds of cameras 10 - 16.
- **Resolution:** Select the video output resolution from **720p**, **1080p** and **1080i**.

Note: The Resolution options are not available for GV-SNVR1600, which only supports the resolution of **1080p**.

3.6 Service

In the Service page, you can connect GV-SNVR with GV-Center V2 and GV-Vital Sign Monitor.

Center V2	VSM
Enable	☒
IP Address	192.168.0.175
Port	5551
Username	admin
Password	*****
 Connected	

Center V2	VSM
Enable	☒
IP Address	192.168.3.25
Port	5609
Username	admin
Password	*****

Figure 3-10

1. Click **Enable** to enable connection with GV-Center V2 or GV-Vital Sign Monitor.
2. Type the **IP Address** of the GV-Center V2 or GV-Vital Sign Monitor.
3. Modify the **Port** if needed.
4. Type the **Username** and **Password** of the GV-Center V2 or GV-Vital Sign Monitor.
5. Click **Apply**. A green icon will appear if the connection is established successfully.

Note:

1. GV-SNVR is only compatible with GV-Center V2 and GV-Vital Sign Monitor V15.10 or later.
 2. Remote playback is not supported.
 3. For GV-Center V2, audio function of live view is only supported in Single Live View Window, and the IP device must be connected through stream 1.
 4. For GV-Vital Sign Monitor, the Video Log Storage function is not supported when viewing subscriber status.
-

3.7 System

On the System page, you can change the device name of GV-SNVR and login information. You can also access the time settings and system log.

System	Time	System Log	v1.10r01 2015-02-12
Device Name	GV-SNVR		
Administrator Account	admin		
Administrator Password	•••••		
Guest Account	guest		
Guest Password	•••••		
Auto Login	Enable ▼		
Default Camera Account	admin		
Default Camera Password	•••••		
Load Default		Advanced Options ▼	Apply

Figure 3-11

[System]

- **Device Name:** Type a desired name for the GV-SNVR.
- **Administrator Account:** Type the username of the Administrator. The default is **admin**.
- **Administrator Password:** Type the password of the Administrator. The default is **admin**.
- **Guest Account:** Type the username of the Guest. The default is **guest**.
- **Guest Password:** Type the password of the Guest. The default is **guest**.
- **Auto Login:** Select **Enable** to automatically log in the GV-SNVR at startup.
- **Default Camera Account:** Set up the default username of camera for connection. The default is **admin**.
- **Default Camera Password:** Set up the default password of camera for connection. The default is **admin**.

To restore the GV-SNVR to default settings, click **Load Default** and follow the on-screen instructions. Optionally, press the **Load Default** button on the rear panel of the device for 15 seconds.

To import or export the system settings and update firmware, click **Advanced Options** for configuration. Optionally, you can configure through the GV-IP Device Utility. For details, see *6.2 Using the GV-IP Device Utility*.

[Time]

System	Time	System Log
Time Zone	(UTC) Coordinated Universal Time ▼	
Daylight Saving Time	☐ Enable	
Time Sync	☒ Enable NTP	pool.ntp.org
	Date Setup	 2015-04-15
	Time Setup	8 : 1 : 45
Apply		

Figure 3-12

- **Time Zone:** Select a time zone of your location.
- **Daylight Saving Time:** Click **Enable** and type the start time and end time for the system to automatically adjust to Daylight Saving Time.
- **Time Sync:** Click **Enable NTP** and type the URL of a network time server to synchronize the clock of GV-SNVR over network. Otherwise, manually set up the date and time by filling out the corresponding fields.

To enable the settings, click **Apply**.

Note: You can also use the GV-IP Device Utility to synchronize the date and time of GV-SNVR with a computer. For details, see *GV-IP Device Utility Installation Guide* on the Software CD.

[System Log]

This page lists all the changes made to the system.

System		Time	System Log				Page 1/1				
No.	Time	Channel	Type	Event	Note						
1	2015/04/15 02:59:47		User	Login	Local (admin)						
2	2015/04/15 02:59:16		System	Network Failure	LAN						
3	2015/04/15 02:59:12	04	System	Recording Start							
4	2015/04/15 02:59:12	03	System	Recording Start							
5	2015/04/15 02:59:12	02	System	Recording Start							
6	2015/04/15 02:59:12	01	System	Recording Start							
7	2015/04/15 02:59:11		System	Network Resume	LAN						
8	2015/04/15 02:58:43		System	System Startup							
9	2015/04/13 06:47:15		User	Firmware Upgrade							
10	2015/04/13 06:47:15		User	Log Out	Local (admin)						
11	2015/04/13 06:46:59		User	HDD Format	HDD						
12	2015/04/13 06:46:45		User	Login	Local (admin)						
13	2015/04/13 06:46:21		System	Network Failure	LAN						
14	2015/04/13 06:46:18		System	Network Resume	LAN						
15	2015/04/13 06:46:01	04	System	Recording Start							
16	2015/04/13 06:46:01	03	System	Recording Start							
17	2015/04/13 06:46:01	02	System	Recording Start							
18	2015/04/13 06:46:01	01	System	Recording Start							
19	2015/04/13 06:45:55		System	System Startup							

Figure 3-13

To export the system log, click the **Export** button  at the upper-right corner and click **Apply**. A USB storage device needs to be inserted in order to export system log.

To search for specific events, click the **Filter** button  at the upper-right corner to limit the search results using the following options.

- **Time:** Set up the desired time period.
- **Device:** Select a channel.
- **Type:** Select **User** or **System**.
- **Event:** Select a type of event.

Chapter 4 Video Playback

The timeline player plays back recorded video without affecting recording. There are two ways to launch the timeline player:

- On the main screen, click the **Playback** button (No. 6, Figure 2-15).
- On the camera live view, click the desired camera name and select **Instant Playback**.

On the timeline player screen, the system automatically plays back video recording from 3 minutes before the playback function is enabled.

4.1 Timeline Player

Without further settings you can play back the video recording by selecting a time and clicking the **Play** button on Playback Panel. To switch the current view mode, click the **Division** button. Here we use GV-SNVR0400F for illustration.

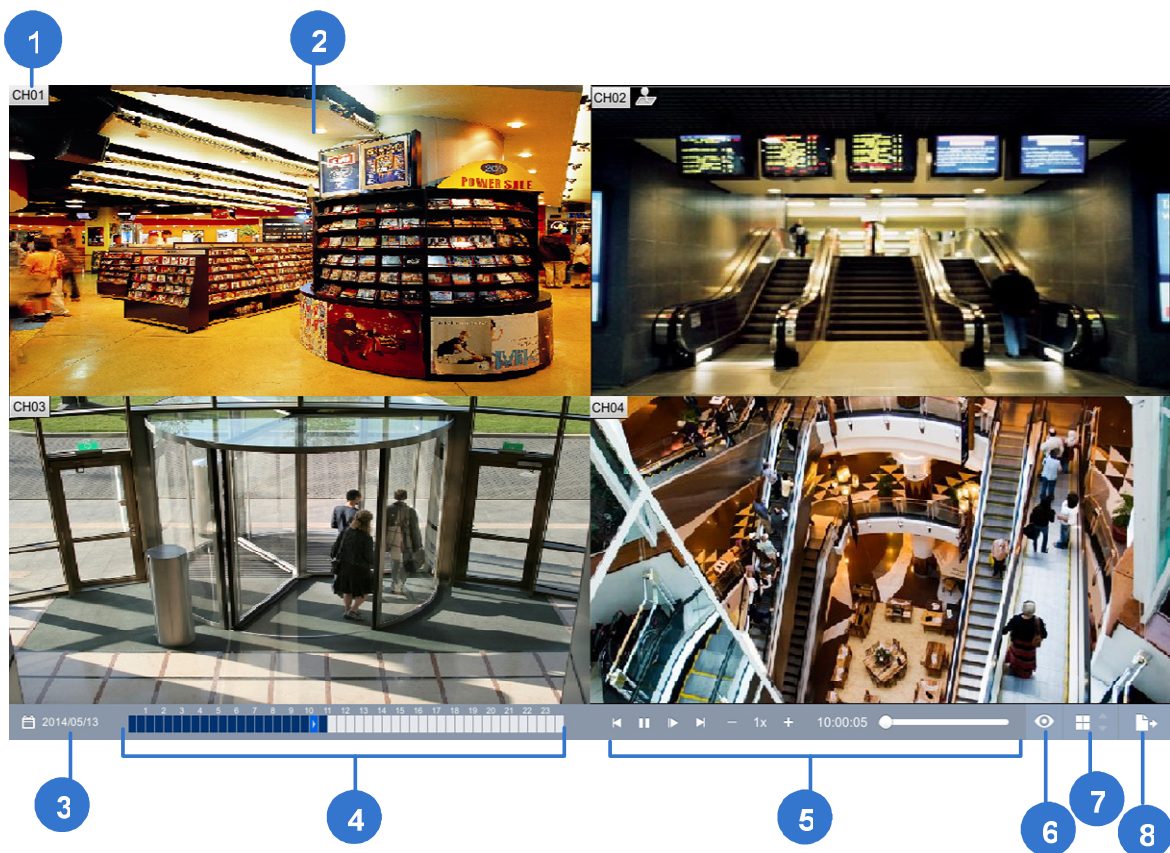


Figure 4-1

The controls in the timeline player screen:

No.	Name	Description
1	Camera Name	Indicates the camera name.
2	Camera View	Displays the playback video.
3	Date Display	Allows you to specify a date to play back the recorded video. The date with video recording is highlighted in blue.
4	Timeline	Consists of 48 grids, with each specifying half an hour. The time period with video recording is highlighted in blue.
5	Playback Panel	Contains typical playback control buttons.
6	Live	Closes the timeline player and returns to live view window.
7	Division	For GV-SNVR0400F, switches between 1-channel and 4-channel view; for GV-SNVR1600, switches between 1-channel, 4-channel, 9-channel and 16-channel view.
8	Export	Exports the video recording as AVI files to an external hard drive.

Use controls on Playback Panel to view the event in the way you want. Move the Slider forward or backward to navigate video frames.

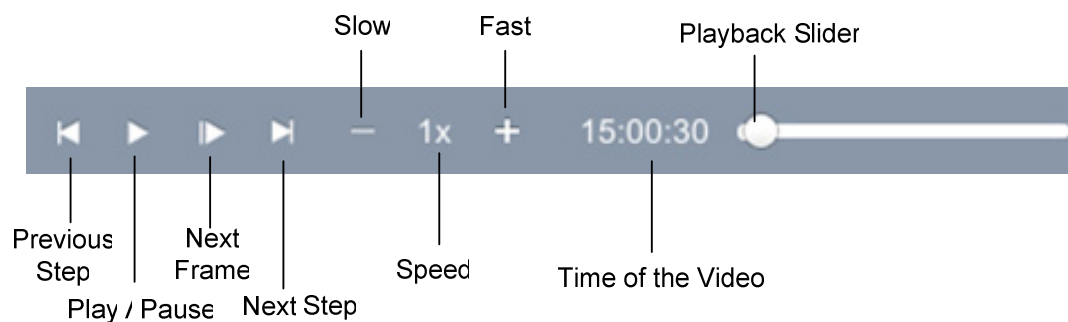


Figure 4-2

4.2 Recording Backup

Using the timeline player, you can back up recordings to the external hard drive. To back up recordings, follow the steps below.

1. Connect an external hard drive of FAT32 format to the USB port on the unit.
2. On the timeline player screen, click **Export** (No.8, Figure 4-1).
3. Select the desired date and time period of video recording.
4. Select the channel of desired camera and click **Export**.

The video recording is exported to the external hard drive.

The backup recordings are in AVI format. To play back the recordings using Windows Media Player, you need to install GeoVision codec in the dedicated PC. Otherwise you can install the GV-ViewLog player for playback.

Note:

1. The recording backup only supports video. The audio will not be included in the backup recordings.
 2. For backup efficiency, it is suggested to use the external hard drive to back up recordings.
 3. If the GV-SNVR is connected with more than one storage device, the video recordings will be backed up to the first storage device connected.
-

Chapter 5 Remote Access to the GV-SNVR

Users can remotely access the GV-SNVR through the following methods:

- Web browser
- Mobile devices installed with GV-Eye
- GV-Edge Recording Manager (Windows Version) V1.1.0.0 or later
- GV-Control Center V3.3.0.0 or later

Note:

1. The maximum number of remote network connection is **10** in total for GV-SNVR0400F and **34** in total for GV-SNVR1600. Every connected channel will be counted as 1 connection.
 2. GV-Edge Recording Manager / GV-Control Center can remotely play back recordings stored on GV-SNVR. However, GV-SNVR only supports remote playback from **2** GV-Edge Recording Manager / GV-Control Center at the same time.
-

5.1 Accessing through Web Browser

To access the live view through Web interface, follow the steps below. Here we use the GV-SNVR0400F for illustration.

1. Open your Web browser and type the IP address of the GV-SNVR.

Note: To look up the IP address of GV-SNVR, see 3.3 *Network*. Optionally, run the GV-IP Device Utility to search for your GV-SNVR. For details, see 6.2 *Using the GV-IP Device Utility*.

2. In both Username and Password fields, type the default value **admin**.

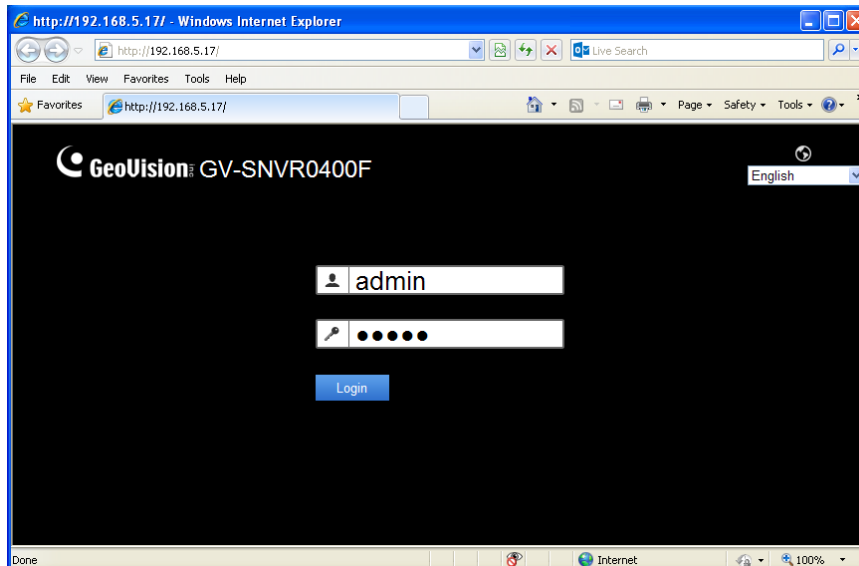


Figure 5-1

3. Select a desired language from the drop-down list at the upper-right corner for the Web interface and click **Login**.
4. To enable the update of live view on your Web browser, you must set the Web browser to allow ActiveX controls and perform a one-time installation of GeoVision's ActiveX components on your computer.

After the installation, live view will be displayed.

5.1.1 Live View Screen

After successfully logging in the Web interface, you can access the live view of connected IP cameras.

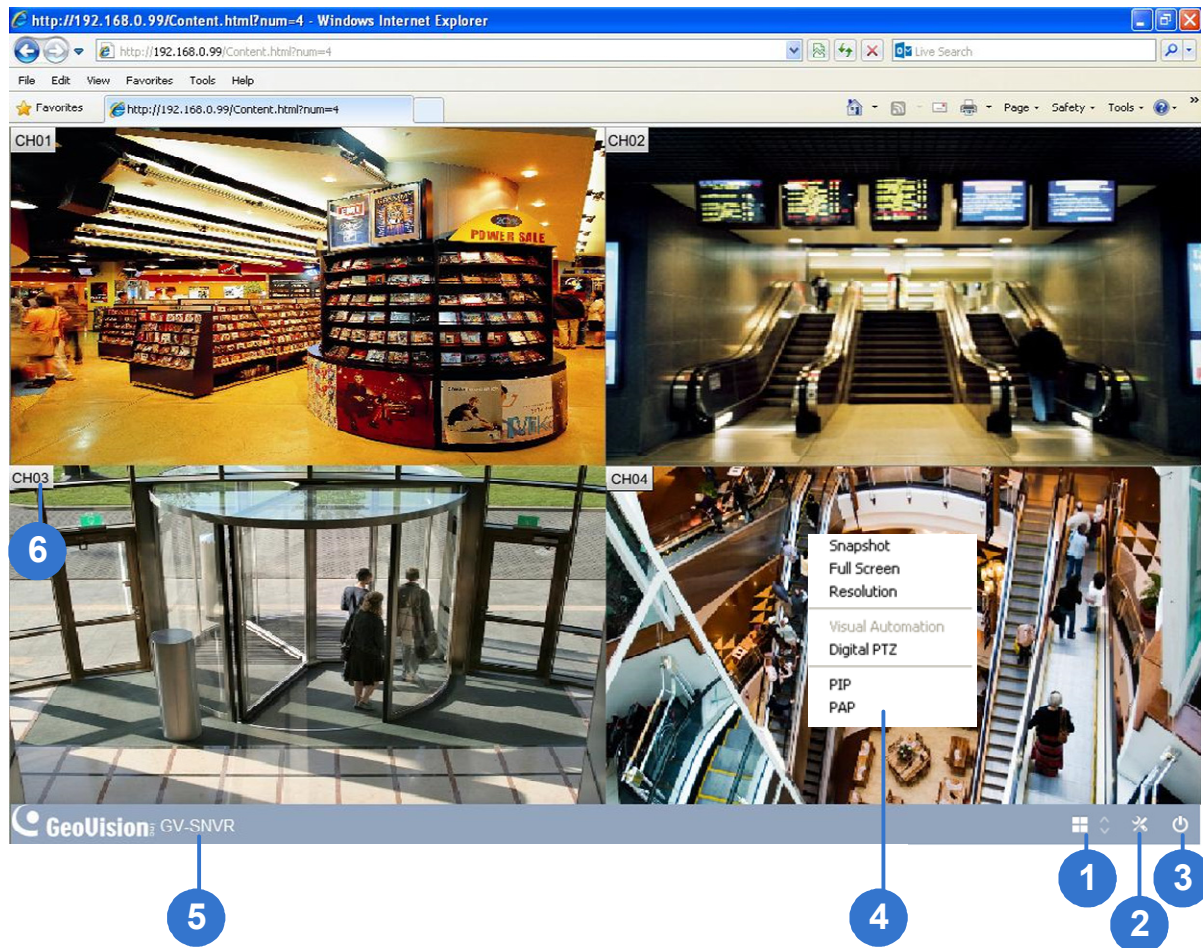


Figure 5-2

No.	Name	Description
1	Division & Page Up / Down	Select screen divisions and switch between cameras in single division.
2	Setting	Access the following system configuration pages of GV-SNVR: Recording, Network, Storage, Service, System. Refer to <i>Chapter 3 System Configuration</i> for more information on these settings. Note that the System Log is not accessible in the System page of the Web interface.

No.	Name	Description
3	Exit	Log out the Web interface.
4	Advanced Options	Right-click the live view of desired camera to access the functions below. Snapshot: Take a snapshot of live video. For details, see 5.1.2 Snapshot of Live Video. Full Screen: Switch the live view to full screen. Resolution: Display the resolution at the lower-right corner of the live view. Digital PTZ: Simulate the PTZ movement on the screen. For details, See 5.1.5 Digital PTZ Control. PIP: Enable the PIP function. For details, See 5.1.3 Picture-in-Picture View. PAP: Enable the PAP function. For details, See 5.1.4 Picture-and-Picture View.
5	Device Name	Shows the device name of GV-SNVR. See <i>Device Name</i> in 3.7 System .
6	Camera Name	Click the camera name to capture snapshot or enable the speaker.

Note:

1. The Web interface of GV-SNVR0400F / 1600 only connects to the main stream of GV-IP Cameras when using single division and 4-division display. For details, see [Appendix B Live View Streaming](#).
2. The Visual Automation function is not supported.
3. The audio function is only supported on the live view of Web interface when the screen division is set to single division or 4 divisions.

5.1.2 Snapshot of Live Video

To take a snapshot of live video, follow the steps below.

1. Right-click on the live view of desired camera and select **Snapshot**. This dialog box appears.

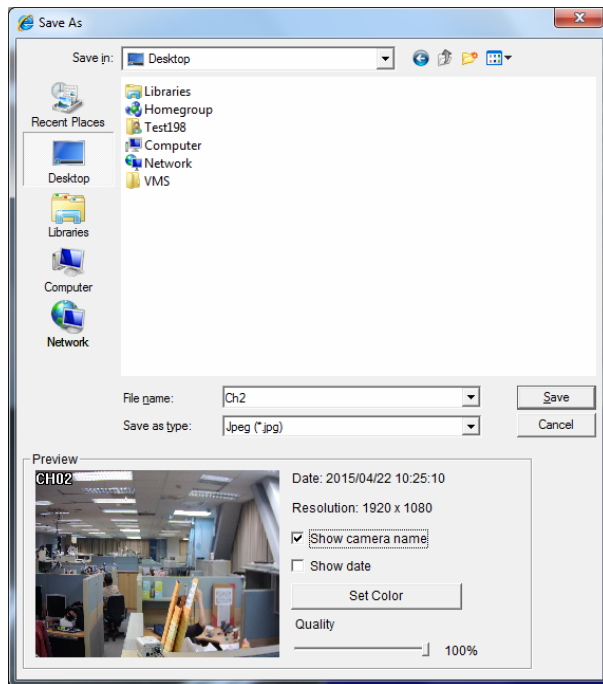


Figure 5-3

2. Select a desired saving path, type the file name and select **JPEG** or **BMP** as the Save as Type.
3. In the Preview field, you can choose whether to tag the snapshot with camera name, time and date, select **Set Color** for the text color and adjust the image quality.
4. Click **Save** to save the captured image.

5.1.3 Picture-in-Picture View

With the Picture in Picture (PIP) view, you can crop the video to get a close-up view or zoom in on the video. This function is useful for detailed images of the surveillance area.

1. Right-click the desired camera live view and select **PIP**. An inset window of the camera view appears in the bottom right corner.



Figure 5-4

2. Double-click the inset window. A hand icon appears.
3. Click the inset window. A navigation box appears.



Figure 5-5

4. Move the navigation box around in the inset window to have a close-up view of the selected area.
5. To adjust the navigation box size, move the cursor to any of the box corners to enlarge or diminish the box.
6. To change the frame color of the navigation box, right-click the image, select **Mega Pixel Setting** and then **Set Color of Focus Area**.
7. To exit the PIP view, right-click the camera view and click **PIP** again.

5.1.4 Picture-and-Picture View

With the Picture and Picture (PAP) view, you can create a split video effect with multiple close-up views on the image. Up to 7 close-up views can be defined for clear and detailed images of the surveillance area.

1. Click the live view of desired camera and select **PAP**. A row of three inset windows appears on the bottom of the screen.

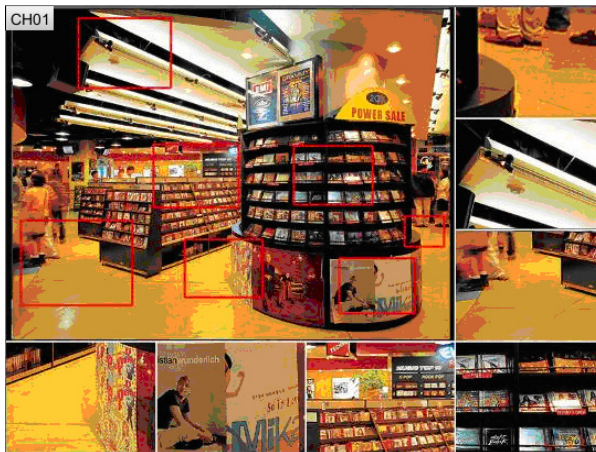


Figure 5-6

2. Draw a navigation box on the image. This selected area is immediately reflected in one inset window. Up to seven navigation boxes can be drawn on the image.
3. To adjust a navigation box size, move the cursor to any of the box corners to enlarge or diminish the box.
4. To move a navigation box to another area on the image, drag it to that area.
5. To change the frame color of the navigation box, right-click the image, select **Mega Pixel Setting** and click **Set Color of Focus Area**.
6. To hide the navigation box on the image, right-click the image, select **Mega Pixel Setting** and click **Display Focus Area of PAP Mode**.
7. To delete a navigation box, right-click the desired box, select **Focus Area of PAP Mode** and select **Delete**.
8. To exit the PAP view, right-click the camera view and select **PAP** again.
9. To add another navigation box when less than seven navigation boxes are drawn, right-click the camera view, select **PAP** to enter, right-click the image, select **Mega Pixel Setting** and then **Enable Add-Focus-Area-Mode**.

5.1.5 Digital PTZ Control

In non-PTZ cameras, the Digital PTZ (DPTZ) function allows you to simulate the PTZ movement on the screen. This function is also supported in PT / PTZ cameras.

Note: The Digital PTZ function is not supported in the 16-division display.

1. Right-click the live view and select **Digital PTZ**. In the middle of the camera view, the DPTZ control panel appears.

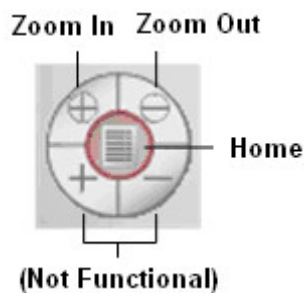


Figure 5-7

2. To zoom in or zoom out, click the corresponding buttons or use the mouse scroll. To bring the visual PTZ view back to its default image, click **Home**.
3. To pan and tilt the visual PTZ view, zoom in on the image first, and then click and hold the arrow. The arrow appears when you place the cursor in one of the eight directions, i.e. up, down, left, right, left up, left down, right up and right down.
4. To adjust the transparency level of the DPTZ control panel, right-click the camera view, find **Digital PTZ** and select **Transparency**. Ten levels range from 10% (fully transparent) to 100% (fully opaque).
5. To close the DPTZ control panel, right-click the camera view and select **Exit**.

5.2 Accessing through Mobile Device

To access the live view of GV-SNVR through the iOS or Android devices, you must install GV-Eye on your mobile devices. With GV-Eye, you can watch multiple live view in dual streams, enable the Picture in Picture (PIP) function and take snapshots from your mobile device. To download the latest GV-Eye and its installation Guide, visit http://www.geovision.com.tw/english/5_8_App.asp

Note:

1. The functions of PTZ control, I/O trigger and remote playback are not supported in the GV-SNVR.
 2. Audio function is only supported when the IP device is connected through stream 1.
-

5.3 Accessing through GV-Edge Recording Manager

You can connect to GV-SNVR from GV-Edge Recording Manager to access live view and play back recordings. For details, refer to *GV-Edge Recording Manager User's Manual*.

Note:

1. GV-SNVR is only compatible with GV-Edge Recording Manager (Windows Version) V1.1.0.0 or later.
 2. Audio function of live view is only supported in Single Live View Window, and the IP device must be connected through stream 1.
-

5.4 Accessing through GV-Control Center

You can connect to GV-SNVR from GV-Control Center to access live view and play back recordings. For details, refer to *GV-Control Center User's Manual*.

Note:

1. GV-SNVR is only compatible with GV-Control Center V1.1.0.0 or later.
 2. Audio function of live view is only supported in Single Live View Window and Matrix View, and the IP device must be connected through stream 1.
 3. Remote playback is not supported when using Remote ViewLog.
-

Chapter 6 Advanced Applications

6.1 Upgrading System Firmware

GeoVision periodically release the updated firmware on the Website. You can upgrade the firmware using an USB storage drive of FAT32 format.

To upgrade the firmware, follow the steps below.

1. Download the firmware file to an USB storage drive.
2. Connect the USB drive to the GV-SNVR.
3. On the main screen, click the **Setting** button  and select **System**.
4. Click the **Advanced Option** button and select **Firmware Upgrade**.
5. Find the firmware file and click **Apply**. This dialog box appears.

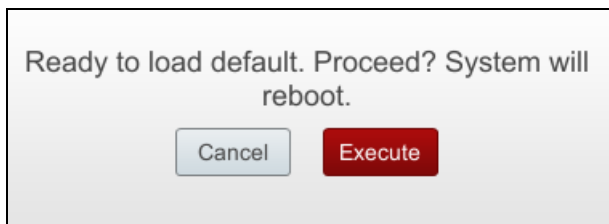


Figure 6-1

6. Click **Execute**. The system starts upgrading firmware and automatically reboots after completing the process.

After the system reboot, the main screen will be displayed automatically.

Note: Optionally you can use the GV-IP Device Utility to upgrade system firmware, especially for multiple GV-SNVR. For details, see the *Upgrading System Firmware* section in 6.2 *Using the GV-IP Device Utility*.

6.2 Using the GV-IP Device Utility

The GV-IP Device Utility detects all the GV-IP Devices in the LAN and allows you to quickly set up the IP address of the device, upgrade firmware and export/import device settings. For details, see *GV-IP Device Utility Installation Guide* on the Software CD/DVD.

6.2.1 Looking up the IP Address

You can use the GV-IP Device Utility to look up the IP address of your GV-SNVR and GV-IP Camera.

1. Install the GV-IP Device Utility from the Software CD / DVD.
2. Double-click the GV-IP Device Utility icon created on your desktop. This dialog box appears and IP devices under the LAN are automatically detected.

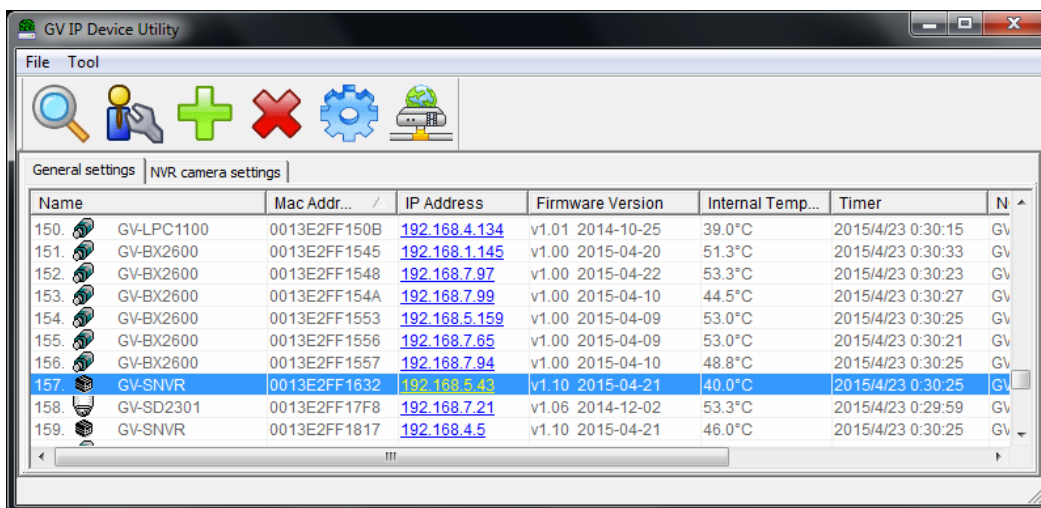


Figure 6-2

3. Double-click the IP device and select **Web Page** to access its Web interface.

6.2.2 Accessing the Live View

You can use the GV-IP Device Utility for quick access to the live view of IP cameras connected with SNVR.

1. Double-click the GV-SNVR in the list and select **Live View**.
2. Select a camera and type the username and password of the camera to access the live view.

6.2.3 Upgrading System Firmware

You can also use the GV-IP Device Utility to upgrade firmware of multiple GV-SNVR at the same time. Note the computer used to upgrade firmware must be under the same LAN with the GV-SNVR.

1. Double-click the GV-SNVR in the list and select **Configure**. This dialog box appears.

Mac Address: 007004021088 IP Address: 192.168.0.99

User Login

User Name: admin VSS Port: 10000

Password: *****

Set IP Address | **Firmware Upgrade** | Device Name | Export settings | Import settings | Other settings

IP Address: 192 . 168 . 0 . 99

Subnet Mask: 255 . 255 . 255 . 0

Default Gateway: 192 . 168 . 0 . 1

DNS Server: 192 . 168 . 0 . 1

HTTP Port: 80

VSS Port: 10000

OK Cancel

Figure 6-3

2. Click the **Firmware Upgrade** tab. This page appears.

Mac Address: 007004021088 IP Address: 192.168.0.99

User Login

User Name: admin VSS Port: 10000

Password:

Set IP Address | **Firmware Upgrade** | Device Name | Export settings | Import settings | Other settings

Version: --- Browse...

☐ Upgrade all devices

Upgrade Cancel

Figure 6-4

3. Click the **Browse** button to locate the firmware file (.img) saved at your local computer.
4. If you like to upgrade all the GV-SNVR in the list, select **Upgrade all devices**.
5. Type **Password**, and click **Upgrade** to start the upgrade.

6.2.4 Backing up and Restoring Settings

With the GV-IP Device Utility, you can back up the configurations in the GV-SNVR and restore the backup data to the current GV-SNVR or import it to another one.

To back up the settings:

1. Run GV-IP Device Utility and locate the desired GV-SNVR.
2. Double-click the GV-SNVR in the list and select **Configure**. Figure 6-3 appears.
3. Click the **Export Settings** tab. This dialog box appears.

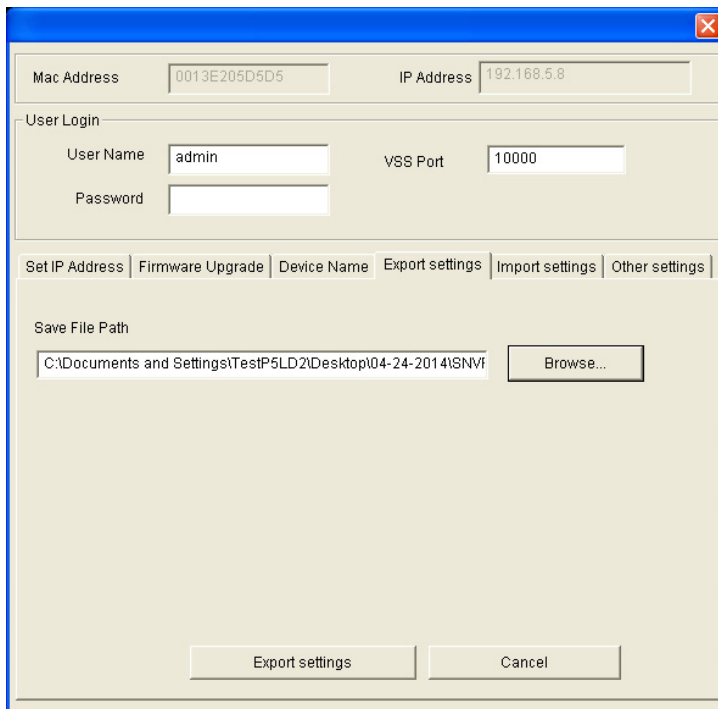


Figure 6-5

4. Click the **Browse** button to assign a file path.
5. Type **Password**, and click the **Export Settings** button to save the backup file.

To restore the settings:

1. In Figure 6-5, click the **Import Settings** tab. This dialog box appears.

Mac Address: 007004021088 IP Address: 192.168.5.175

User Login

User Name: admin VSS Port: 10000

Password:

Set IP Address | Firmware Upgrade | Device Name | Export settings | **Import settings** | Other settings

Version: v1.00 2014-05-22 Browse...

☐ Upgrade all devices

- ☒ Device Name
- ☒ General settings
- ☒ Password settings
- ☒ Network settings

Update setting Cancel

Figure 6-6

2. Click the **Browse** button to locate the backup file (.dat).
3. Select **Upgrade all devices** to import the settings into all the GV-SNVR under the same LAN. To import password settings and/or network settings, select **Password Settings** and/or **Network settings**.
4. Click the **Update Settings** button to start restoring.

Specifications

Hardware

Model		GV-SNVR0400F	GV-SNVR1600
System			
OS		Embedded Linux	
No. of Drive Bay		1 (3.5" HDD)	4 (3.5" HDD)
Power Source		Input: AC 100 ~ 230V, 50 ~ 60 Hz Output: DC 19V, 3.42A, Max. 65 W	Input: AC 100 ~ 230V, 50 ~ 60 Hz Output: Max. 100 W
Mechanical			
Connector	Gigabit Ethernet	1 port, RJ-45	2 ports, RJ-45
	Video Output	HDMI	HDMI and D-Sub
	Audio	1 stereo jack for a speaker	2 stereo jacks for a speaker and a headphone
	USB 2.0	Front: 2 ports, Rear: 2 ports	Front: 1 port, Rear: 4 ports
Note: For GV-SNVR1600, when 2 Ethernet ports are used together, one is LAN port and the other is WAN port.			
LED Indicator		2 LEDs: Power, HDD Error	5 LEDs: Power, LAN, WAN, HDD Status, HDD Error
Operating Temperature		0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 50°C (32°F ~ 122°F)
Humidity		0% ~ 90% RH (non-condensing)	0% ~ 80% RH (non-condensing)
Dimensions (L x W x H)		206 x 220 x 65.5 mm (8.11 x 8.66 x 2.58")	424.6 x 445 x 43.8 mm (16.72 x 17.52 x 1.72")
Net Weight		1.1 kg (2.43 lb)	4.1 kg (9.04 lb)
Regulatory		FCC , CE , RCM , RoHS compliant	

Software

Model		GV-SNVR0400F	GV-SNVR1600
Video and Audio			
Video Compression		H.264	
Video Stream		Dual streams from H.264	
Video Resolution		Up to 1920 x 1080 per channel	
Video Output		720p / 1080i / 1080p (HDMI)	1080p (HDMI / VGA)

Model	GV-SNVR0400F	GV-SNVR1600
Video and Audio		
Display Division	1 / 4	1 / 4 / 9 / 16
Audio Compression	G.711	G.711
Audio Support	Yes	Yes
Two-Way Audio	N/A	N/A
Operation		
Max. Bandwidth	Max. 50 Mbps for 4 channels	Max. 100 Mbps for 16 channels
Recording Mode	Round the clock / Motion Detection / Schedule Recording	
Pre Recording	1 ~ 10 sec.	
Post Recording	30 sec.	
Instant Playback	3 min.	
Backup Type	USB storage device of FAT32 format	
Note: For backup efficiency, it is suggested to use the external hard drive to back up recordings.		
Management		
Language	Czech / English / French / German / Hungarian / Italian / Japanese / Portuguese / Russian / Slovakian / Slovenian / Spanish / Traditional Chinese	
Firmware Upgrade	Upgrade through OSD or GV-IP Device Utility	
Network		
Network Type	LAN, WAN, Internet	
Protocol	DHCP, DynDNS, HTTP, NTP, TCP, UDP	
System Monitoring and Recovery		
Power Restoration	Automatic restart after power outage	
Monitoring	Software Watchdog	
Remote Monitoring		
Live View	Max. 10 channels connection	Max. 34 channels connection
Monitoring Environment	IE, Chrome, Firefox and mobile devices	
Smart Device Access	GV-Eye for iOS and Android	
Access from Web Browser	Live View, Image Snapshot, Picture in Picture, Picture and Picture, Digital PTZ	
Note: All specifications are subject to change without notice.		

Appendix

A. Tested and Supported Hard Disk Drives

For system efficiency, it is recommended to use the enterprise-level hard disk drives instead of desktop-level or green HDD. The HDD listed below are tested by GeoVision.

Model	Capacity
WD	
WD4000F9YZ	4 TB
WD4000FYYZ	4 TB
WD4001FAEX	4 TB
WD40EFRX	4 TB
WD3000F9YZ	3 TB
WD3000FYYZ	3 TB
WD30EFRX	3 TB
WD30EURS	3 TB
WD30EURX	3 TB
WD2000F9YZ	2 TB
WD2000FYYZ	2 TB
WD20EURS	2 TB
WD20EZR	2 TB
WD1003FBYZ	1 TB
WD10EURX	1 TB
Seagate	
ST4000NC000	4 TB
ST4000NM0033	4 TB
ST3000NM0033	3 TB
ST3000VX000	3 TB
ST2000NC000	2 TB
ST2000VX000	2 TB
ST1000DM003	1 TB
ST1000VX000	1 TB

Model	Capacity
Toshiba	
MG03ACA400	4 TB
DT01ABA300V	3 TB
MG03ACA300	3 TB
DT01ABA200V	2 TB
DT01ACA200	2 TB
Hitachi	
HUA723030ALA640	3 TB
HUS724040ALA640	4 TB
HUS724020ALA640	2 TB

B. Live View Streaming

The default streaming for local display, Web browser and smart device access are listed below.

		Screen Display	GV-SNVR0400F	GV-SNVR1600
Local		1 Division	Stream 1	Stream 1
		4 Divisions	Stream 1	Stream 1
		9 Divisions	N/A	Stream 2
		16 Divisions	N/A	Stream 2
Webpage		1 Division	Stream 1	Stream 1
		4 Divisions	Stream 1	Stream 1
		9 Divisions	N/A	Stream 2
		16 Divisions	N/A	Stream 2
GV-Eye	V2.0	1 Division	Stream 1	Stream 1
		6 Divisions	Stream 2	Stream 2
	V2.1	1 Division	Stream 2	Stream 2
		6 Divisions	Stream 2	Stream 2